TABULAR LIST OF REPLACEABLE PARTS

FOR

CODE PRACTICE EQUIPMENT

AN/GGQ-1

Manufactured by

TELEGRAPH APPARATUS CO.

PUBLISHED BY AUTHORITY
OF
THE CHIEF SIGNAL OFFICER
Order No. 32504-Phila-43
May 21, 1943

SIGNAL CORPS

CODE PRACTICE EQUIPMENT

AN/GGQ-1

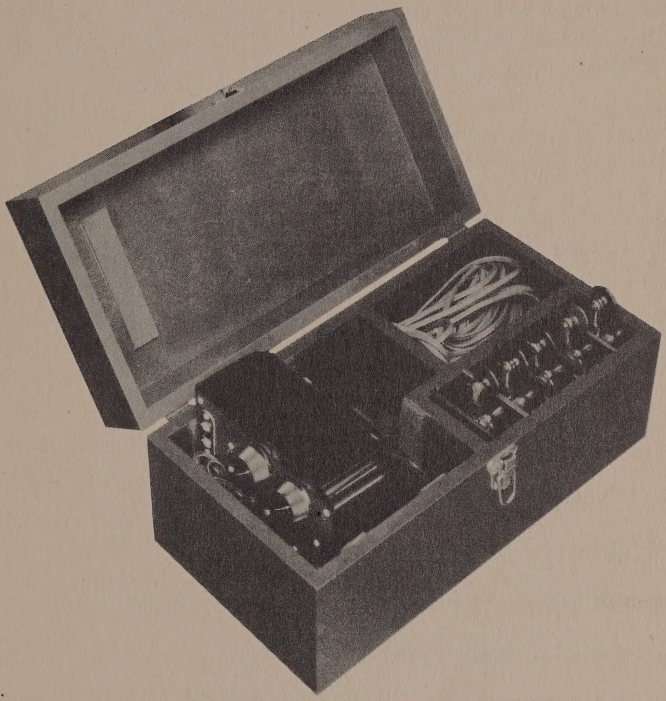

FIG. 1 AN/GGQ-1 CODE PRACTICE KIT PACKED FOR SHIPMENT

Manufactured by

TELEGRAPH APPARATUS COMPANY

325 WEST HURON STREET, CHICAGO, ILLINOIS

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INSTRUCTION MANUAL AND LIST OF REPLACEABLE PARTS FOR SIGNAL CORPS TELEGRAPH PRACTICE KIT AN/GGQ-1

The AN/GGQ-1 Telegraph Practice Kit contains the following equipment:

Item	Quantity	Equipment
1	1	Wooden carrying case 10¾" long, 8½" deep and 8" high, weight 21 lbs. loaded complete with handle and lid hasp.
2	1	110 volt AC/DC Oscillatone complete with one 117P7GT tube.
3	5	Model J38 standard Signal Corps straight keys.
4	5	3 foot length of wire one end of which is to be attached to a key, the other end terminated in two TL123 clips.
5	1	30 foot length of wire to serve as a "trunk" line to which the keys will be connected through their wire connections.
6	2	117P7GT tubes placed under the wire compartment in the carrying case for use as "running" spares.

Through the use of the Code Practice Kit the Instructor and his students can perfect their ability to both send and receive code by transmitting to one another.

After removing the Oscillatone, keys and wire from the carrying case the equipment should be set up as follows:

1. Plug in the power cord of the Oscillatone to a convenient 110 volt Alternating or Direct current outlet.

2. Connect both wires of one end of the 30 foot length of wire to the "KEY" terminals which are in the upper left hand corner of the Oscillatone when looking at the unit from the back. (Refer to Figs. 5 and 9.)

3. For operation of the loud speaker the wire jumper must be connected to the two "Speaker Disconnect" terminals which can be located on the particular model Oscillatone you are using by referring to Figs. 5 and 9.

4. Should the instructor or one of the students desire to use headphones he can do so by connecting them to the proper terminals indicated in Figs. 5 and 9. The use of headphones in no way impairs or affects the loud speaker operation of the Oscillatone should both headphone and loud speaker operation be desired.

5. The individual keys can be connected to each wire in the 30 foot length by untwisting that wire sufficiently to allow the TL123 clips to be clamped on the wire with the sharp point of the clip perforating the insulation and making contact with the actual conductor it covers. (Refer Fig. 3.)

6. After you are assured that proper electrical connection has been made between the individual keys and the "trunk" wire, the Oscillatone is turned ON by snapping the toggle switch SW_1 to the ON position. Please allow approximately 45 seconds for the tubes to reach operating temperature.

7. After the Oscillatone has reached operating temperature, closing the key on the front of the unit or any of the other keys in the circuit will cause it to emit an audio note. The volume of this note or signal can be raised or lowered by adjusting the Volume Control R_6.

8. Should you wish to vary the pitch or frequency of the note adjust the Pitch Control R_1 until a note most pleasing to the ear has been heard.

9. Reference is made to the fact that the Oscillatone has been available with either a magnetic or permanent magnet speaker being used. In examining the Oscillatone you are using to determine which of the two types it is, please refer to the illustrations which call attention to the speaker type used in Figs. 6 and 10.

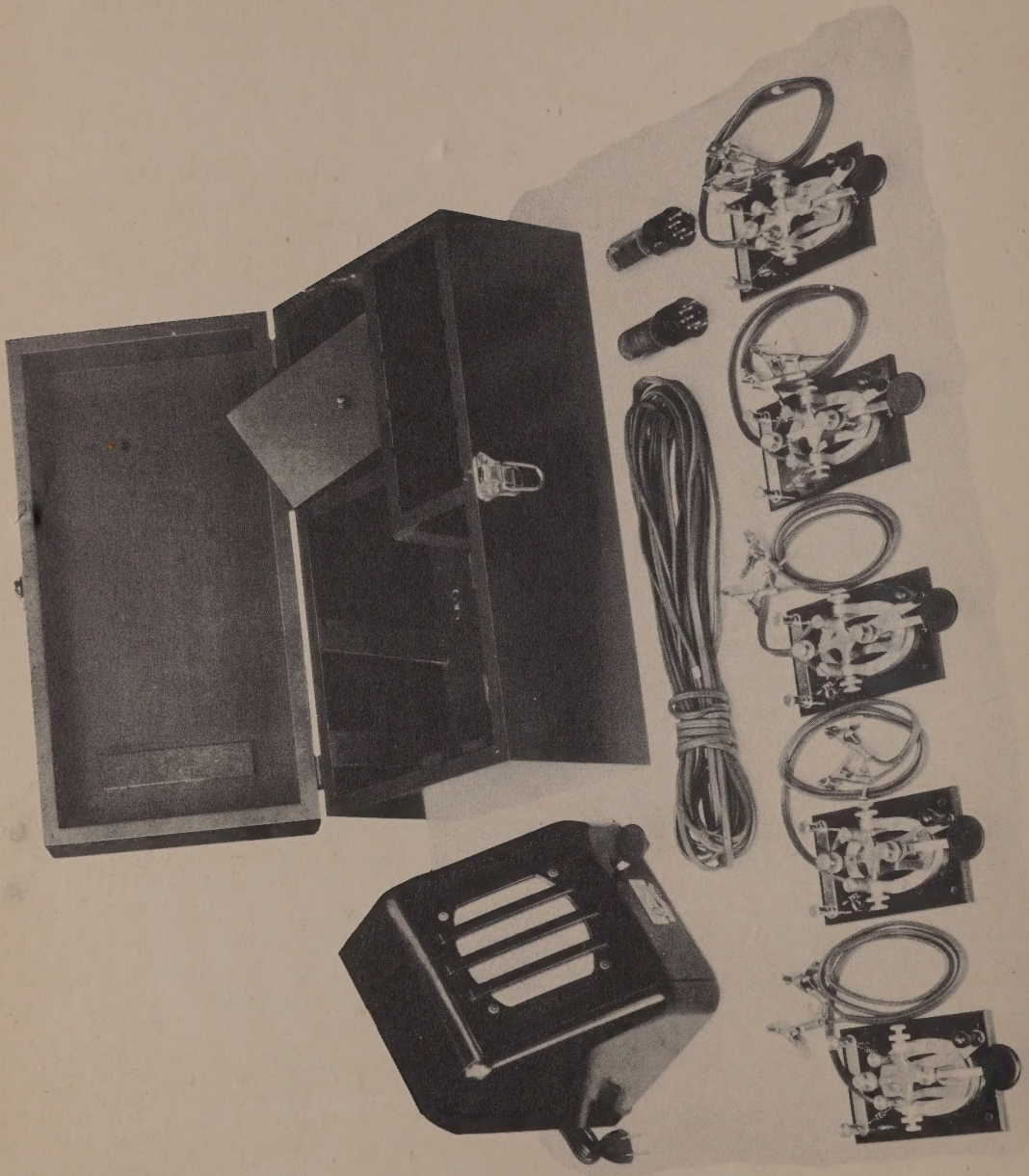

FIG. 2 AN/GGQ-1 TELEGRAPH CODE PRACTICE KIT SHOWING ALL COMPONENTS

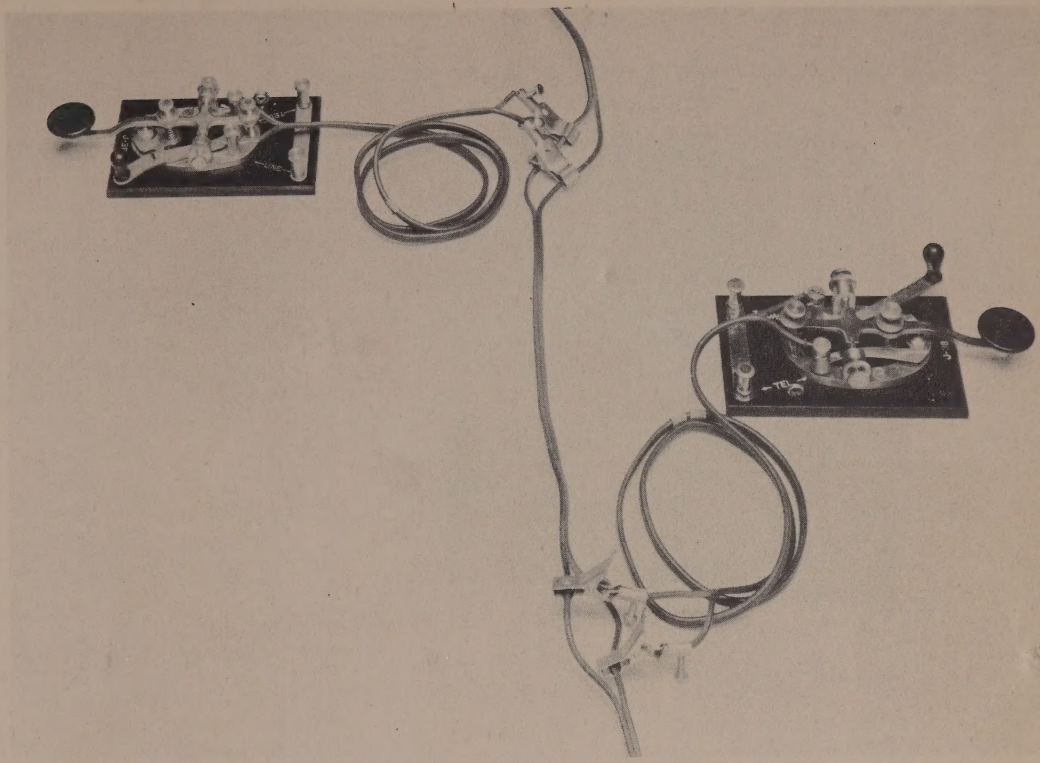

FIG. 3 VIEW SHOWING KEYS CONNECTED TO TRUNK LINE WITH TL123 TYPE CLIP

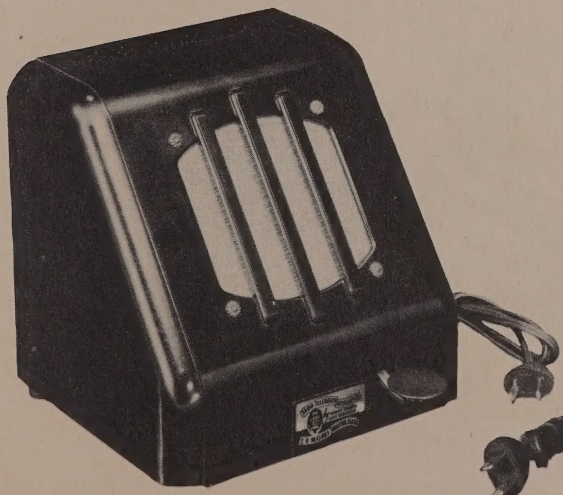

FIG. 4 FRONT VIEW OF MAGNETIC SPEAKER MODEL OSCILLATONE

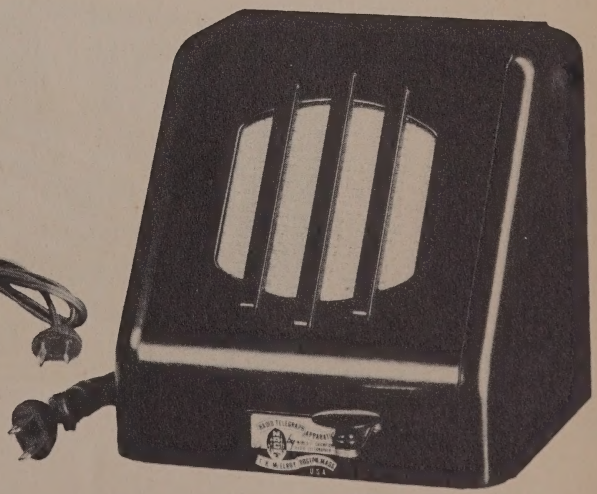

FIG. 5 FRONT VIEW OF PERMANENT MAGNETIC SPEAKER OSCILLATONE

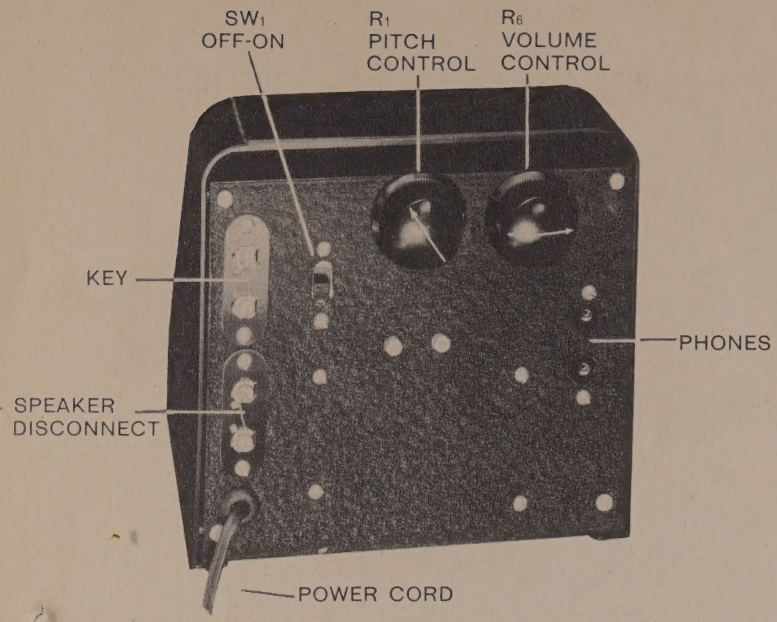

FIG. 6 BACK VIEW OF MAGNETIC SPEAKER OSCILLATONE

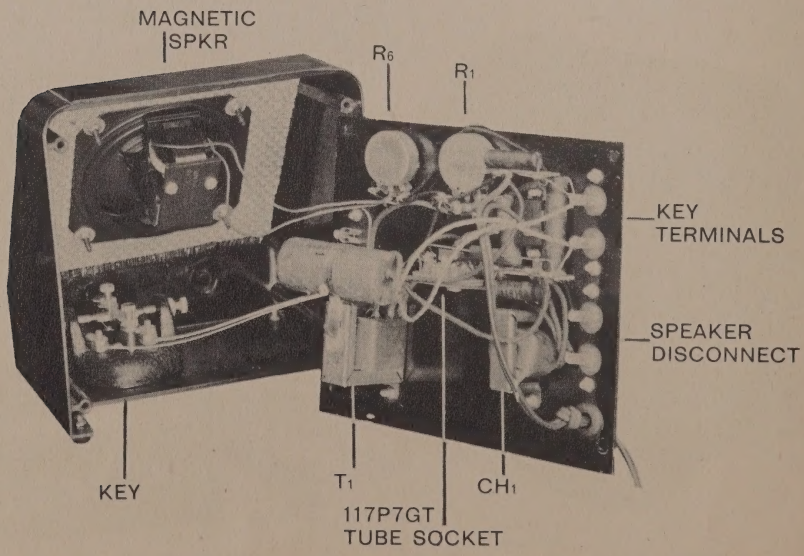

FIG. 7 INSIDE VIEW OF MAGNETIC SPEAKER OSCILLATONE

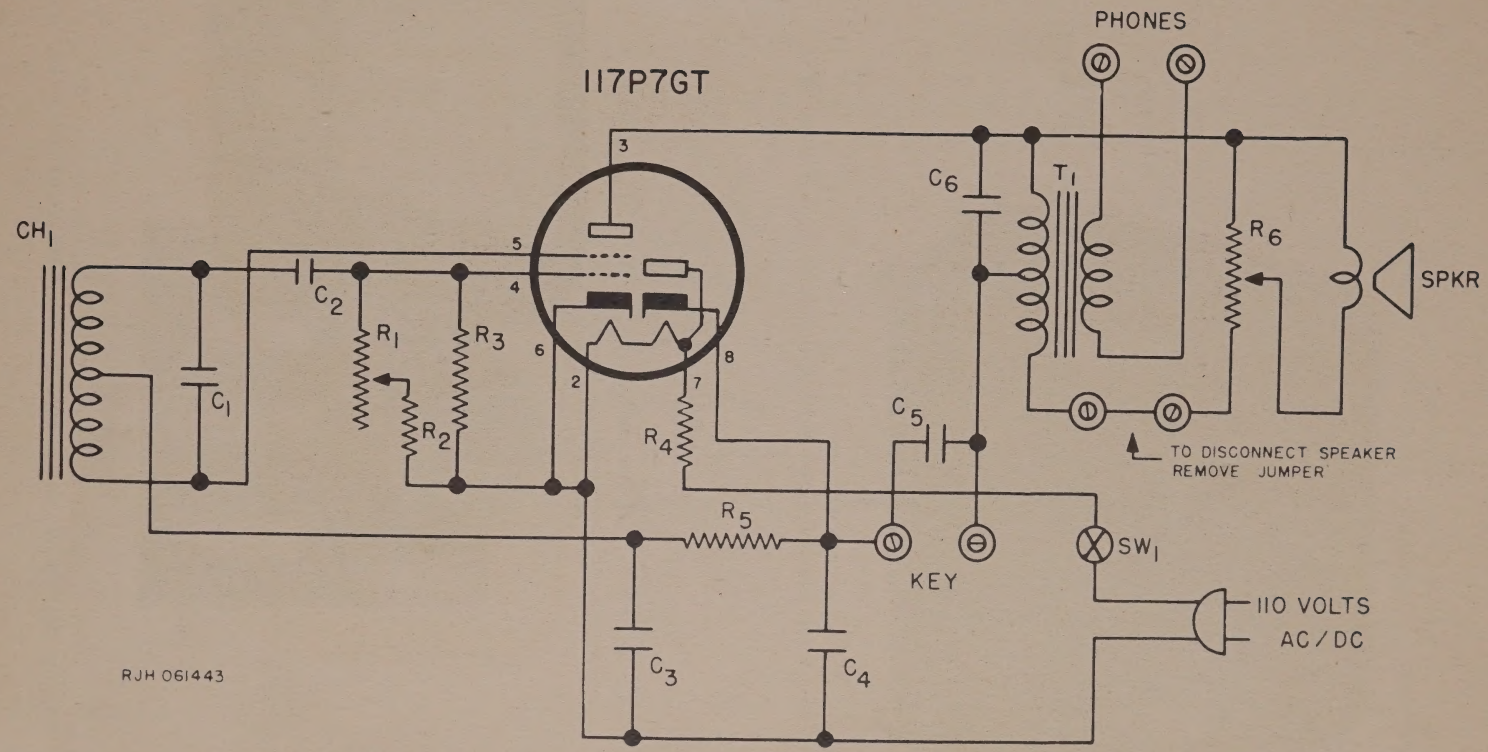

FIG. 8 SCHEMATIC DIAGRAM OF MAGNETIC SPEAKER OSCILLATONE

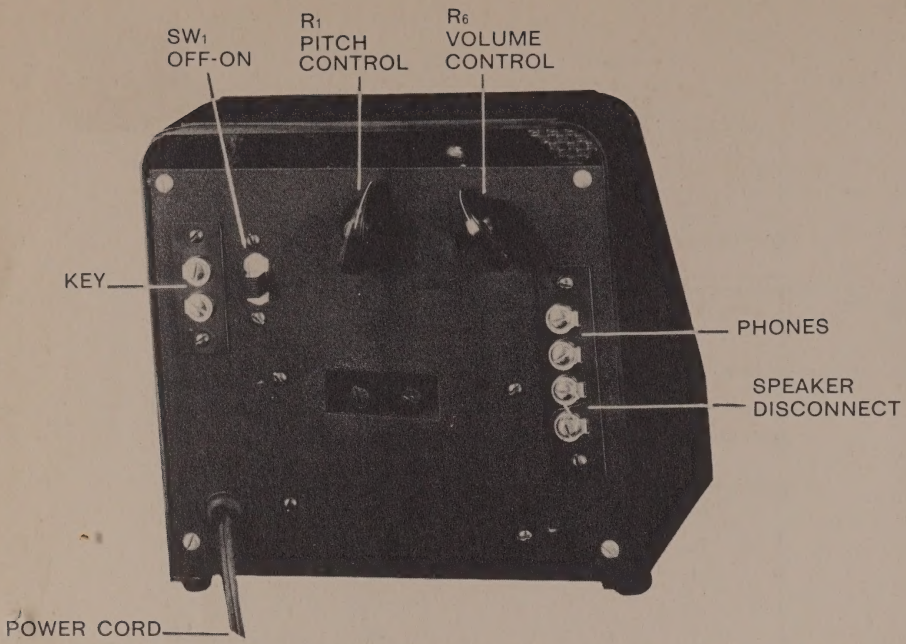

FIG. 9 BACK VIEW OF PERMANENT MAGNET SPEAKER OSCILLATONE

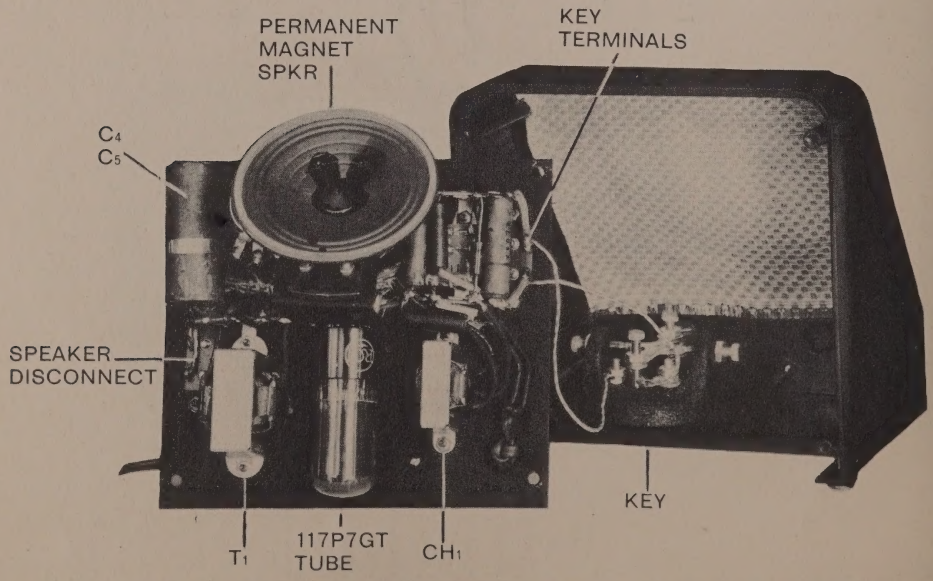

FIG. 10 INSIDE VIEW OF PERMANENT MAGNET SPEAKER OSCILLATONE

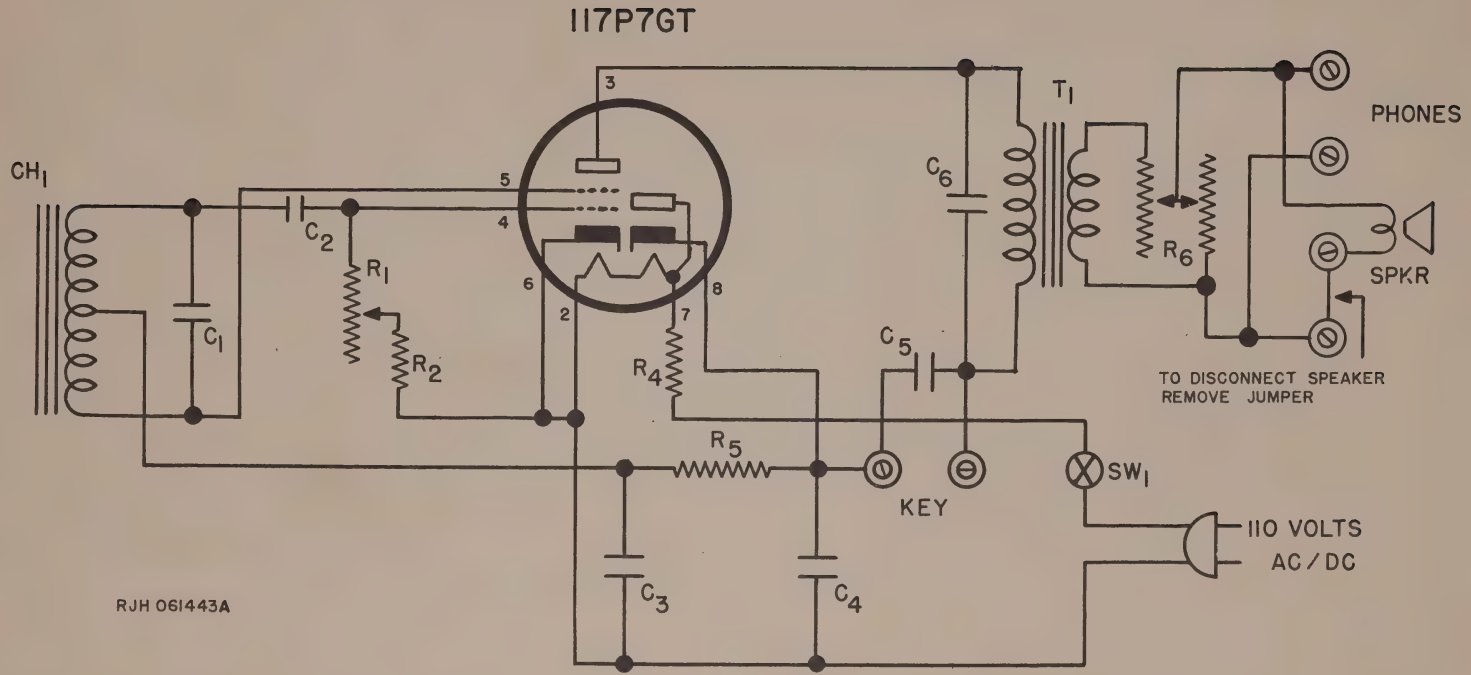

FIG. 11 SCHEMATIC DIAGRAM OF PERMANENT MAGNET SPEAKER OSCILLATONE

LIST OF REPLACEABLE PARTS
for
CODE PRACTICE EQUIPMENT
AN/GGQ-1

Order No. 32504-Phila-43 Contractor Telegraph Apparatus Co. Date 5-21-43

Quantity in Equip.	Ref. Sym.	Name of Part and Description	Function	Mfg. Code	Contr's. Dwg. or Part No.
		See Fig. 11			
#2	C_1	Capacitor, paper .01 mf. 400 volt tubular (Same as C_6) AA11	Osc. tank	S	CP4001
#1	C_2	Capacitor, paper .02 mf. 400 volt tubular AA12	Osc. grid blocking	S	CP4002
#2	C_3 & C_4	Capacitor, electrolytic, dual 20 mf. 150 volt tubular RDS 150-20-20	Filter	M	CE2015
#1	C_5	Capacitor, paper .05 mf. 400 volt tubular AA15	Key by-pass	S	CP4005
	C_6	Capacitor, (Same as C_1)	Plate by-pass	S	CP6001
#1	R_1	Potentiometer, 100,000 ohms 33-010-109	Pitch control	C	RV0010
#1	R_2	Resistor, fixed, carbon, 10,000 ohms $\frac{1}{2}$ watt SCI-$\frac{1}{2}$-10,000	Pitch control minimum	B	RF0310
#1	R_4	Resistor, fixed wire wound, 150 ohms 1 watt SI-1-150	Filament surge limiting	B	RF0115
#1	R_5	Resistor, fixed carbon, 2,000 ohms 1 watt SI-1-2000	Filter	B	RF0102
#1	R_6	Resistor, variable, 6 ohm, "L" pad special 15269	Volume control	U	RV00006
#1	CH_1	Inductor, center tapped, special 4843	Audio osc. grid choke	U	CH1010
#1	T_1	Transformer, coupling tube plate to load - special 9271	Output transformer	U	TR1171
#1	SW_1	Switch, toggle .75 amp., 125 volt AC/DC 723	On-off switch	W	SW0007
#1	Spkr.	Reproducer, permanent magnet dynamic 361563 (See last item in list if speaker is magnetic type)	Loud speaker	Q	SPM4T
*#1	117P7GT or 117N7GT	Tube rectifier, power amplifier, 117 volt heater octal base	Oscillator	R	117P7GT or 117N7GT
#1		Bakelite cabinet	Case for oscillatone	T	BMC1T
#1		Octal wafer socket 6714	Tube mounting	D	TSW8
#1		5' line cord complete with plug P0 with plug	Power cord	H	LCP5
#1	Key	Telegraph Key #200T	Instructor's key	T	#200T
5		Key J-38	Students Key		Sig. Corps Dwg.25007D1-4
#1		Twisted wire - 30' #18 stranded two conductor cotton covered G & Y Type C	"Trunk" line	H	
#5		Twisted wire - 3' #18 as above-ends $\frac{1}{2}$ inch skinned and tinned terminating in TL123 clips on one end G & Y Type C	To connect keys to trunk line	H	
#2		Knobs - bar type black bakelite with set screws 2150	Volume and pitch control	I	BCK02
#1		Telegraph Key knobs black bakelite 354	Mount on key lever	K	BKK01
#1		Grill cloth	To protect speaker	V	SR0021

List of Replaceable Parts for Code Practice Equipment AN/GGQ-1 (Cont'd.)

Quantity in Equip.	Ref. Sym.	Name of Part and Description	Function	Mfg. Code	Contr's. Dwg. or Part No.
#4		Rubber feet RB½	Oscillatone mounting	A	RF0381
#1		Metal bracket	PM speaker and socket mounting	T	MBS01
1		Wooden sectional case - special - CC350	Carrying Case	T	CC350
#1		4 screw terminal strip 4-76	For external connection	J	4-76
#1		2 screw terminal strip 2-76	For external connection	J	2-76
#3		4 lug terminal strips 1621	For internal anchoring of wires	A	
This list of parts is used in place of parts with a similar number in the reference symbol column above when the magnetic speaker is used: See Fig. 8					
1	R_1	Potentiometer 500,000 ohms A130	Pitch control	C	RV0050
1	R_3	Resistor fixed, carbon 68,000 ohms ½ watt SCI-½-68,000	Pitch control shunt	B	RF0370
1	R_6	Resistor, variable 100,000 ohms linear taper 33-010-109	Volume control	C	RV0006
1	T_1	Transformer coupling tube plate to load center tapped pri- special 8775B	Output transformer	U	TR1172
1	Spkr.	Reproducer, magnetic 40-H	Loud speaker	Q	SM4T

The word Special indicates part made for or by the contractor.
#Furnished by contractor as part of maintenance parts group.
* - Two included with the equipment as "running" spare-

TABLE OF STANDARD NUTS, BOLTS, SCREWS, AND WASHERS

Quantity	Description	Size	Length	Thread	Where used
#4	Self tapping screw binder head	#6	3/8	USS6	To fasten back plate
#16	Round head machine screws	#6	3/8	SAE 32	Mounting screws
#16	Hex nuts	#6		SAE 32	For above
#1	Grommet	3/8"	To fit 3/8" hole		Bushing for line cord
#4	Lock washers	#5	Internal star type		Mounting washers
4	Rosette screws	#6	13/16	SAE 32	To mount magnetic speaker
4	Washers	#6	Flat metal		For above
4	Nuts	#6		SAE 32	For above

INDEX TO MANUFACTURERS

Abbrev.	Name and Address
A	American Radio Hardware New York, N. Y.
B	Speer Carbon Co. St. Marys, Pa.
C	Centralab Milwaukee, Wisc.
D	Cinch Mfg. Co. Chicago, Ill.
H	Hatfield Wire and Cable Hacketstown, N. J.
I	Harry Davies Chicago, Ill.
J	Howard B. Jones Chicago, Ill.
K	Consolidated Molded Products Scranton, Pa.
M	Micamold Radio Corp. Brooklyn, N. Y.
Q	Quam Nichols Co. Chicago, Ill.
R	Radio Corporation of America Harrison, N. J.
S	Sprague Specialties Co. North Adams, Mass.
T	Telegraph Apparatus Co. Chicago, Ill.
U	Utah Radio Products Chicago, Ill.
V	Sears Roebuck & Co. Chicago, Ill.
W	Wirt Philadelphia, Pa.